





FIG. 3A



Hs	MGQSGRSRHQ	KFAPPQAQLR	NLEAYAAAPH	SFVFTRGCTG	RNIRQLSLDV	50
Mm	MGQSGRSRHQ	KRNRAQAQLR	NLESYAAOPH	SFVFTRGRAG	RNVROLSLDV	50
Dm	MGG-KKKVHP	KTRTAAFKAS	EPSEIVEAPH	SFVIHRLAC	PYITDULDF	49
Hs	RRVMEFVTAS	RLQVRKKNSL	KDCVAVAGPL	GVTHFLILAK	QBINVYFKLM	100
Mm	RRVMEFLTAT	RLQVRKKNSL	KDCVAVAGPL	GVTHFLILIK	TCNSVYLKLM	100
Dm	RRIMEFVTAS	NUREKRMNRI	QDFVCLSSFF	HVSHMGIFNK	ASTQLSEKVV	99
Hs	RLPGGPPTLTF	QVKKYSILVRD	VVSSLRRHRM	HEQQFAHPPL	LVLNSFGPHG	150
Mm	RLPGGPPTLTF	QISKYTLIRD	VVSSLRRHRM	HEQQFNHPPL	LVLNSFGPOA	150
Dm	RLRFGSLTF	KVHOFTLARD	VISLSKKQMT	CNCHFKHAPL	VIMNIESGDC	149
Hs	MHVKLMATMF	QNLFPSINVH	KVNLNTIKRC	LLTDYNPDSQ	ELDFRHYSIK	200
Mm	MHIKLMATMF	QNLFPSINVH	TVNLNTIKRC	LLINYNPDSQ	ELDFRHYSVK	200
Dm	KHLKLMATTF	QNMFPSINLA	TVNIGTIRRC	VLFSYNPDTK	LVEMRHYSVQ	199
Hs	VVPVGASRGM	KKLLQEKFPN	MSRLQDISEI	LATCAGLSES	EAEPDGDHNI	250
Mm	VVPVGASRGM	KKLLQEKFPN	MSRLQDISEI	LATGVGLSDS	EMEPDGEHNT	250
Dm	VVPVGLKRAV	QKIVKGTVPN	LGKCNEVVDF	VTKDGYASES	EABIDEQSHV	249
Hs	TELPQAVAGR	GNMRAQOSAV	RLTEIGPRMT	LQLIKVOEGV	GEQKVMFHSE	300
Mm	TELPQAVAGR	GNMRAQOSAV	RLTEIGPRMT	LQLIKIOEGV	GNGNVLFHSE	300
Dm	V-LAOTLKSK	GNLEDKKSSI	KIHEIGPRIT	MOLIKIEEGL	LTGEVIMHSH	298
Hs	VSKTEEELQA	ILIAKEKKLR	LKAQRQAQQA	QNVQFKQEQR	EAHRKKSLEG	350
Mm	VHKTEEELQA	ILIAKEKKLR	LKAQRQQAQA	ENLOFSRSCR	GPQEEEP--G	348
Dm	VVKTEDEKET	LRKLVEKKRK	QKEORKKEQA	ENRARNLKLK	KDEKWAAKRA	348
Hs	MKKARVGGSD	EEAS-GIFSR	TASLELGECD	DEQEDDDIEY	FQOAVGEAPS	399
Mm	RHKASPCCKGR	RZQZCZGPRG	TARGOWGAGQ	PEDEEDDAEY	FROAVGEEPD	398
Dm	AEGRTDS---	-----	-----	DPEDDAEY	YKEEVGEEPD	373
Hs	EDLFF-EAKQ	KRLAKSPG--	--RKRKRWEM	D-RGRRLCD	--QFFPKT--	439
Mm	EDLFFTAAGR	RR----OGGL	LAKK-----	Q-RGKEQRPK	NK	437
Dm	EDLFKMEAKS	SRKRPSLGGG	MKYMKRAKL	DTKDKNCKSE	RTDFYDRKCK	423
Hs	---KDKSQGA	QARRGPRGAS	RDGGRGRGRG	PPGKRVA		473
Dm	FDRKDKKDKF	DPKNRAKFD	PKNKRAKFDH	BKSRK-SK		460

FIG. 3B

	10	20	30	40	50	60	
1	GCCTGATGTC	GTCCACGACC	GTGCCGGCTC	TCAGGCGCCG	GAAGTGAGCT	GCGCACGGCC	60
61	GGAAGCGGCG	GACGCAGGAG	GCCTCGTGGA	GGACACAGCA	GCATGGGACA	GTCAGGGAGG	120
121	TCCCGGCACC	AGAAGCGCGC	CCCGCCCCAG	GCGCAGCTCC	GCAACCTCGA	GGCCTATGCC	180
181	GCGAACCCGC	ACTCGTTCGT	GTTACGCGA	GGCTGCACGG	GTCGCAACAT	CCGGCAGCTC	240
241	AGCCTGGACG	TGCGGCGGGT	CATGGAGCCC	GTCAGTCCA	GCCGTCTGCA	GGTTCGTAAG	300
301	AAGAACTCGC	TGAAGGACTG	CGTGGCAGTG	GCTGGGCCCC	TCGGGGTCCAC	ACACTTTCTG	360
361	ATCCTAGCAA	AACAAGAGAC	CAATGTCTAC	TTTAAGCTGA	TGCGCCTCCC	AGGAGGCCCC	420
421	ACCTTGACCT	TCCAGGTCAA	GAAGTACTCG	CTGGTGCGTG	ATGTGGTCTC	CTCACTGCGC	480
481	CGGACCCGCA	TGCACGAGCA	GCAGTTTGCC	CACCCACCCC	TCCTGGTACT	CAACAGCTTT	540
541	GGCCCCCATG	GTATGCATGT	GAAGTCATGT	GCCACCATGT	TCCAGAACCT	GTTCCCTCC	600
601	ATCAACGTGC	ACAAGGTGAA	CCTGAACACC	ATCAAGCGCT	GCCTCCTCAT	CGACTACAAC	660
661	CCCGACTCCC	AGGAGCTGGA	CTTCCGCCAC	TATAGCATCA	AAGTTGTTCC	TGTGGGCGCG	720
721	AGTCGCGGGA	TGAAGAAGCT	GCTCCAGGAG	AAGTTCCCCA	ACATGAGCCG	CCTGCAGGAC	780
781	ATCAGCGAGC	TGCTGGCCAC	GGGCGCGGGG	CTGTCGGAGA	GCGAGGCAGA	GCCTGACGGC	840
841	GACCACAACA	TCACAGAGCT	GCCTCAGGCT	GTCGCTGGCC	GTGGCAACAT	GCGGGCCCAG	900
901	CAGAGTGCAG	TGCGGCTCAC	CGAGATCGGC	CCGCGGATGA	CACTGCAGCT	CATCAAGGTC	960
961	CAGGAGGGCG	TCGGGGAGGG	CAAAGTGATG	TTCCACAGTT	TTGTGAGCAA	GACGGAGGAG	1020
1021	GAGCTGCAGG	CCATCCTGGA	AGCCAAGGAG	AAGAAGCTGC	GGCTGAAGGC	TCAGAGGCAG	1080
1081	GGCCAGCAGG	CCCAGAATGT	GCAGCGCAAG	CAGGAGCAGC	GGGAGGCCCA	CAGAAAGAAG	1140
1141	AGCCTGGAGG	GCATGAAGAA	GGCACGGGTC	GGGGGTAGTG	ATGAAGAGGC	CTCTGGGATC	1200
1201	CCTTCAAGGA	CGGCGAGCCT	GGAGTTGGGT	GAGGACGATG	ATGAACAGGA	AGATGATGAC	1260
1261	ATCAGATATT	TCTGCCAGGC	GGTGGGCGAG	GCGCCCAGTG	AGGACCTGTT	CCCCGAGGCC	1320
1321	AAGCAGAAAC	GGCTTGCCAA	GTCTCCAGGG	CGGAAGCGGA	AGCGGTGGGA	AATGGATCGA	1380
1381	GGCAGGGGTC	GCCTTTGTGA	CCAGAAGTTT	CCCAAGACCA	AGGACAAGTC	CCAGGGAGCC	1440
1441	CAGGCCAGGC	GGGGGCCCCAG	AGGGGCTTCC	CGGGATGGTG	GGCGAGGCCG	GGGCCGAGGC	1500
1501	CGCCCAGGGA	AGAGAGTGGC	CTGAGCCCCA	GCCGCACCCG	AGCAGCGGCT	GGATTGAACG	1560
1561	CCCCAGATTG	GGGCCCCGAGA	TGTGGCCCTC	GGTTTCCTTT	CATAAAGGAG	TTGTGTCCCC	1620
1621	AGCCCTTCCA	CTCCAGTAAA	GAAGTGAATT	GGCAAAAAAA	AAAA		1664

FIG. 6A

	10	20	30	40	50	60	
1	MGQSGRSRHQ	KRAPPOAQLR	NLEAYAANPH	SFVFTRGCTG	RNIRQLSLDV	RRVMEPVTAS	60
61	RLQVRKKNSL	KDCVAVAGPL	GVTHFLILAK	QETNVYFKLM	RLPGGP TLTF	QVKKYSLV RD	120
121	VVSSLRRHRM	HEQQFAHPPL	LVLNSFGPHG	MHVKLMATMF	QNLFPSINVH	KVNLNTIKRC	180
181	LLIDYNPDSQ	ELDFRHYSIK	VVPVGASRGM	KKLLQEKFPN	MSRLQDISEL	LATGAGLSES	240
241	EAEPDGDHNI	TELPQAVAGR	GNMRAQQSAV	RLTEIGPRMT	LQLIKVQEGV	GEGKVMFH SF	300
301	VSKTEELQA	ILEAKEKKLR	LKAQRQAQQA	QNVQRKQEQR	EAHRKKSLEG	MKKARVGGSD	360
361	EEASGIP SRT	ASLELGEDDD	EQEDDDIEYF	CQAVGEAPSE	DLFPEAKQKR	LAKSPGRKRK	420
421	RWEMDRGRGR	LCDQKFPKTK	DKSQGAQARR	GPRGASRDGG	RGRGRGRPGK	RV AZ	474

FIG. 6B

MM		FGQGGKQAAWGSPGGPDIRSAIAPGELRNLESYAAQPHSFV	41
HS			
MM	FTRG--RAGRNVRQLSLDVRVMEEPLATRLQVRKKNSLKDCVAVAGPLGMTHFLTLTK	98	
HS		LGPRMTHFLTLISK	13
MM	TD--NSVYLKLMLRLEGGITLTFQISKYTLLRDVVSLSRRH-RMHEQQEFAHPDLVLNSEFG	155	
HS	TE--TINVYFKLMRLRLEGGITLTFQVKKYSLVRDVVSLSRRH-RMHEQQEFAHPDLVLNSEFG	70	
MM	PQG-----MHIKLMATMFONLEPSINVHTVNLTITKEQLTINYNPDSQEIDFRHY	205	
HS	PHG-----MHVKLMAIMFONLFPSINVHKVTNLTIKRQSSXDLKFGFPRSLDFRPPI	121	
MM	SVKVVPVGASRGMKKILLQ-----EKFPNMSRLQDISELLATGVG-----	244	
HS	IAFKGGSCWAPNSGGL	137	
MM	-----LSDSEVEPDGEHN-----TTETPDAVAG-RGNMQAQQSA	277	
MM	VRLTEIGPRMTLLQLIKIQEGVGNGNVLFHSFVHKTEEDLQAILAAKEKLRLKAQRQNQQ	337	
MM	AENLQRXRSCRXPTRRRRAWQA-----	358	

FIG. 7